

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C12N 15/12, 15/85, C07K 14/705, 16/28, C12N 5/10, C12Q 1/00, 1/68		A3	(11) International Publication Number: WO 96/01317
			(43) International Publication Date: 18 January 1996 (18.01.96)
(21) International Application Number: PCT/US95/08193		(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG).	
(22) International Filing Date: 27 June 1995 (27.06.95)		Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
(30) Priority Data: 08/270,643 1 July 1994 (01.07.94) US		(88) Date of publication of the international search report: 18 April 1996 (18.04.96)	
(71) Applicant: THE SALK INSTITUTE FOR BIOLOGICAL STUDIES [US/US]; 10010 North Torrey Pines Road, La Jolla, CA 92037 (US).			
(72) Inventors: EVANS, Ronald, M.; 8615 La Jolla Village Drive North, La Jolla, CA 92037 (US). FOREMAN, Barry, M.; Apartment #299, 8568 Via La Jolla, La Jolla, CA 92037 (US). KLIEWER, Steven, A.; 104 Southwick Court, Cory, NC 27513 (US). ONG, Estelita, S.; 6307 Hannon Court, San Diego, CA 92117 (US).			
(74) Agent: REITER, Stephen, E.; Pretty, Schroeder, Bruggemann & Clark, Suite 2000, 444 South Flower Street, Los Angeles, CA 90071 (US).			
(54) Title: MAMMALIAN PEROXISOME PROLIFERATOR-ACTIVATED RECEPTORS AND USES THEREOF			
(57) Abstract <p>Peroxisome proliferator-activated receptor subunits designated PPARγ and PPARδ are described. Nucleic acid sequences encoding the receptor subunits, expression vectors containing such sequences and host cells transformed with such vectors are also disclosed, as are heterodimeric PPAR receptors comprising at least one of the invention subunits, and methods for the expression of such novel receptors, and various uses therefor.</p>			

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	GB	United Kingdom	MR	Mauritania
AU	Australia	GE	Georgia	MW	Malawi
BB	Barbados	GN	Guinea	NE	Niger
BE	Belgium	GR	Greece	NL	Netherlands
BF	Burkina Faso	HU	Hungary	NO	Norway
BG	Bulgaria	IE	Ireland	NZ	New Zealand
BJ	Benin	IT	Italy	PL	Poland
BR	Brazil	JP	Japan	PT	Portugal
BY	Belarus	KE	Kenya	RO	Romania
CA	Canada	KG	Kyrgyzstan	RU	Russian Federation
CF	Central African Republic	KP	Democratic People's Republic of Korea	SD	Sudan
CG	Congo	KR	Republic of Korea	SE	Sweden
CH	Switzerland	KZ	Kazakhstan	SI	Slovenia
CI	Côte d'Ivoire	LI	Liechtenstein	SK	Slovakia
CM	Cameroon	LK	Sri Lanka	SN	Senegal
CN	China	LU	Luxembourg	TD	Chad
CS	Czechoslovakia	LV	Latvia	TG	Togo
CZ	Czech Republic	MC	Monaco	TJ	Tajikistan
DE	Germany	MD	Republic of Moldova	TT	Trinidad and Tobago
DK	Denmark	MG	Madagascar	UA	Ukraine
ES	Spain	ML	Mali	US	United States of America
FI	Finland	MN	Mongolia	UZ	Uzbekistan
FR	France			VN	Viet Nam
GA	Gabon				

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 95/08193

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C12N15/12 C12N15/85 C07K14/705 C07K16/28 C12N5/10
C12Q1/00 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 C07K C12N C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 268, no. 36, 25 December 1993 MD US, pages 26817-26820, YIJUN ZHU ET AL. 'Cloning of a new member of the peroxisome proliferator-activated receptor gene family from mouse liver' see abstract see page 26818, left column, paragraph 5 - right column, paragraph 2 see page 26818, right column, paragraph 4 - page 26820, right column, paragraph 1; figure 1 --- -/--	1-3,6, 12-14, 23,24, 26-30, 32,34-36

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

A document member of the same patent family

Date of the actual completion of the international search

14 February 1996

Date of mailing of the international search report

06. 03. 96

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+ 31-70) 340-2040, Tlx. 31 651 epo nl,
Fax: (+ 31-70) 340-3016

Authorized officer

Montero Lopez, B

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 95/08193

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol. 196, no. 2, 29 October 1993 ORLANDO, FL US, pages 671-677. FANG CHEN ET AL. 'Identification of two mPPAR related receptors and evidence for the existence of five subfamily members' see abstract see page 673, paragraph 2 - page 674, paragraph 3; figures 1,2 see page 676, paragraph 2</p>	<p>1-5, 23-28, 37,38</p>
X	<p>WO,A,93 06215 (THE SALK INSTITUTE FOR BIOLOGICAL STUDIES) 1 April 1993</p> <p>see page 1, line 33 - page 2, line 8 see page 4, line 19 - page 5, line 28 see page 9, line 9 - line 28 see page 11, line 34 - page 12, line 9 see page 13, line 22 - page 19, line 27 see page 23, line 30 - page 24, line 25 see SEQ ID Nos. 9, 10</p>	<p>1,4-8, 10, 12-14, 18-23, 25-35, 37,38</p>
X	<p>GB,A,2 265 276 (MERCK & CO INC) 29 September 1993</p> <p>see page 3, line 21 - page 19, line 10</p>	<p>1,4-8, 10, 12-14, 18-23, 25-35, 37,38</p>
P,X	<p>PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, vol. 91, no. 15, 19 July 1994 WASHINGTON US, pages 7355-7359, S.A. KLIEWER ET AL. 'Differential expression and activation of a family of murine peroxisome proliferator-activated receptors' see abstract see page 7355, right column, paragraph 2 - paragraph 3 see page 7356, right column, paragraph 2; figure 1 see page 7356, right column, last paragraph - page 7358, left column, paragraph 1</p>	<p>1-6, 11-14, 23-30, 32,34-36</p>

INTERNATIONAL SEARCH REPORT

information on patent family members

Inter national Application No

PCT/US 95/08193

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO-A-9306215	01-04-93	AU-B- 2579692	27-04-93
		CA-A- 2115452	01-04-93
		EP-A- 0609240	10-08-94

GB-A-2265276	22-09-93	KR-B- 9503024	29-03-95
		CN-A- 1078839	24-11-93
		DE-A- 4306080	02-09-93
		JP-A- 7264435	13-10-95
		US-A- 5339111	16-08-94
